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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,161	03/31/2004	Charles D. Carr	A8732	4465

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EXAMINER	
STEIN, JAMES D	

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,161	CARR, CHARLES D.	
	Examiner	Art Unit	
	James D. Stein	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8 and 9* is/are allowed.

6)☒ Claim(s) *1 and 10* is/are rejected.

7)☒ Claim(s) *2-7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *0604*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over [USPAT 6,571,041] to Bourcier et al. and further in view of [USPUB 20050018969] to Deane.

Fig. 15 of Bourcier et al. shows an optical alignment device comprising a base plate (not shown, abstract and col. 4 lines 52-55), a rotatable plate 14 rotatably mounted on the base plate (col. 4 line 65 – col. 5 line 5); and a sliding plate 12 slidably mounted on the base plate (col. 6 lines 13-16). Fig. 15 shows the rotatable plate 14 to include mounting surfaces 98 for mounting optical components 11 thereon (col. 5 lines 41-45). Furthermore, the mounting surface is taught to further comprise v-groove features for mounting optical elements 11 (col. 5 lines 46-48). Fig. 5 also shows that the sliding plate 12 includes features (32, 22 26, 28, 30 and 16). Additionally, the base plate (not shown) must inherently include features to accommodate the sliding surface 16 of the sliding plate (abstract, col. 6 lines 14-15).

Therefore, Bourcier et al. disclose the claimed invention except for said features to be manufactured to the same tolerance by being chemically etched by the same process. Deane discloses a related optical alignment device comprising features 16 and 20 that are etched to the same tolerance by a common etching process [¶0020]. Deane teaches this to be advantageous because high tolerance levels of less than 1 micron may be obtained. Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art to modify the device as disclosed by Bourcier et al. such that the base plate, rotatable plate and sliding plate include features manufactured to the same tolerance by a common etching process in order to provide high alignment tolerances of less than 1 micron.

Allowable Subject Matter

Claims 2-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the cited prior art discloses or suggests the base plate to include es a slot for guiding said sliding plate, and an underside surface which includes first etched regions on either side of said slot, and wherein the sliding plate includes extended portions including transversely projecting tabs, upper surfaces of said tabs being in contact with said first etched regions. The etched regions discussed in the Deane reference are intended for mounting optical components, rather than for providing structural features that facilitate the motion of the sliding and rotating plates. It would not have been obvious to modify the devices disclosed in the prior art to achieve these structural features as a means to improve alignment tolerances.

Claims 8 and 9 are allowed. None of the cited prior art discloses or suggests a method of making an optical alignment apparatus, comprising; providing a base plate, and a rotatable plate and a sliding plate for mounting to said base plate; etching a slot in said base plate for mounting said sliding plate; etching grooves in an underside of said base plate on either side of said slot; etching transversely extending tabs on said sliding plate in a thickness direction thereof; mounting said sliding plate to said base plate such that said tabs ride in said grooves and upper surfaces of said sliding plate are flush with said base plate at regions apart from an optical element mounting surface of said sliding plate; and mounting said rotatable plate to said base plate at a pivot point. The etched regions discussed in the Deane reference are intended for mounting optical components, rather than for providing structural features that facilitate the motion of the sliding and rotating plates. It would not have been obvious to modify the devices

disclosed in the prior art to achieve these structural features as a means to improve alignment tolerances.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: [USPUB 20040052470] to Kim et al., which discloses a related optical alignment device comprising a base plate, sliding plate and rotating plate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James D. Stein
GAU 2874

John D. Lee
Primary Examiner